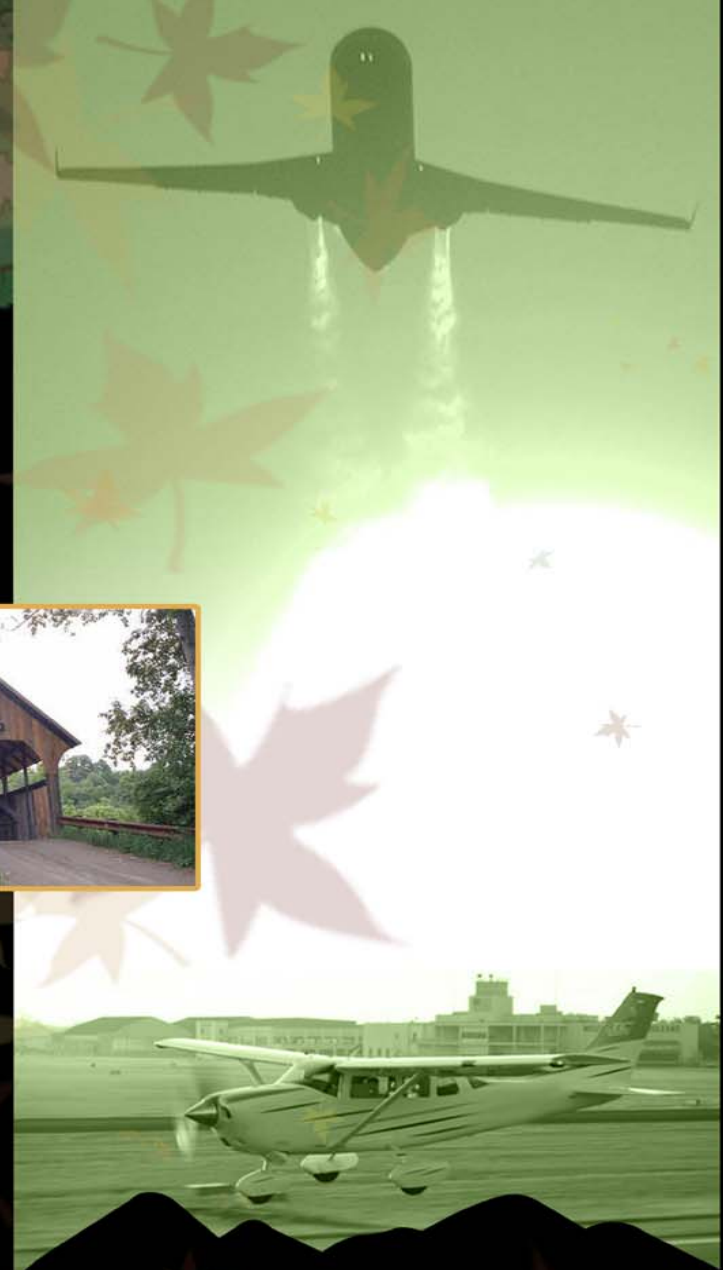


Vermont Airport System & Policy Plan

September 2006

Prepared for:
VTrans

Prepared by:
Wilbur Smith Associates



ENGINEERS
PLANNERS
ECONOMISTS

Wilbur Smith Associates

A detailed map of Vermont is visible on the left side of the slide, showing major roads, towns, and geographical features. The map is partially obscured by the presentation content.

Presentation Topics

- Project Overview
- Airport System Plan
- Airport Policy Plan

A detailed map of Vermont is visible on the left side of the slide, showing various towns and roads. The map is partially obscured by the title and list.

Airport System and Policy Plan

- Plan Overview/AIMS Review
- System Plan
- Policy Plan Update
- Acoustical Evaluation
- PHOTOSLOPE

Airport System Plan

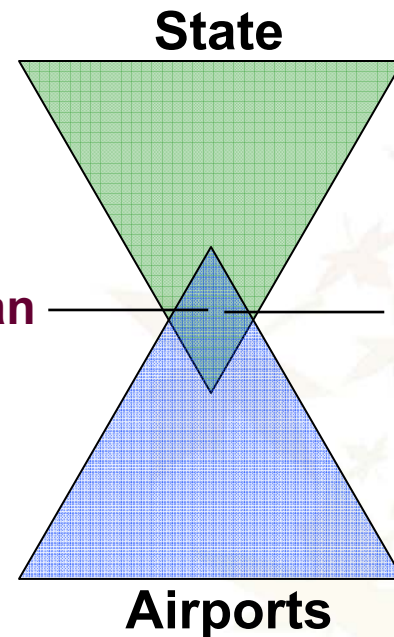
Goal: To provide strategic guidance related to system development

Top Down Planning

Bottom Up Implementation

System Plan

CIP



A detailed map of Vermont is shown on the left side of the slide, partially obscured by the title and list. It displays various towns, roads, and geographical features. The map is oriented vertically, with Montpelier at the top and Springfield at the bottom.

Airport System Plan

- System Plan Objectives, Goals, and Performance Measures
- Inventory
- Role Analysis
- Forecasts
- System Analysis
- Capital Improvement Plan



System Plan Objectives

- Identify and analyze aviation assets and needs of the State to assure that aviation performs the role needed for Vermont's economy and citizens
- Provide continued guidance for development of a system of airports to meet the State's existing and future air transportation needs, identifying 5, 10, and 20-year projects and giving guidance to meet associated needs
- Build consensus among public policy makers, airport sponsors and users so that the plan's recommendations can be more readily accomplished



Goals

- **Accessibility:** *Provide a system of airports that is accessible from both the ground and air*
- **Development:** *Provide an airport system that preserves and enhances existing infrastructure*
- **Safety and Security:** *Promote a safe and secure system of airports*

Goals, Objectives and Performance Measures

Performance Measures	Benchmarks		
Accessibility	A	C	B
Evaluation Categories			
Tests for Adequacies, Deficiencies, & Surpluses			

A map of Vermont is shown on the left side of the slide, featuring major cities like Montpelier, Barre, and Springfield, along with various roads and geographical features. The map is partially obscured by the text and list on the right.

Inventory Data

- Ownership, Service Classification, NPIAS Role
- Airside Facilities
- Navigational Aids (NAVAIDS) & Lighting
- Landside Facilities
- Based Aircraft and Operations

Airport Service Classification



A map of Vermont is visible on the left side of the slide, showing various towns and roads. The map is partially obscured by the text and the decorative border.

Airport Roles

- FAA only uses Commercial Service and General Aviation
- VT-specific roles evaluate function of airport beyond FAA definition
- Use to determine demand for aviation and facility needs
- Numeric process used to stratify system including some weighting



System Contribution Factors

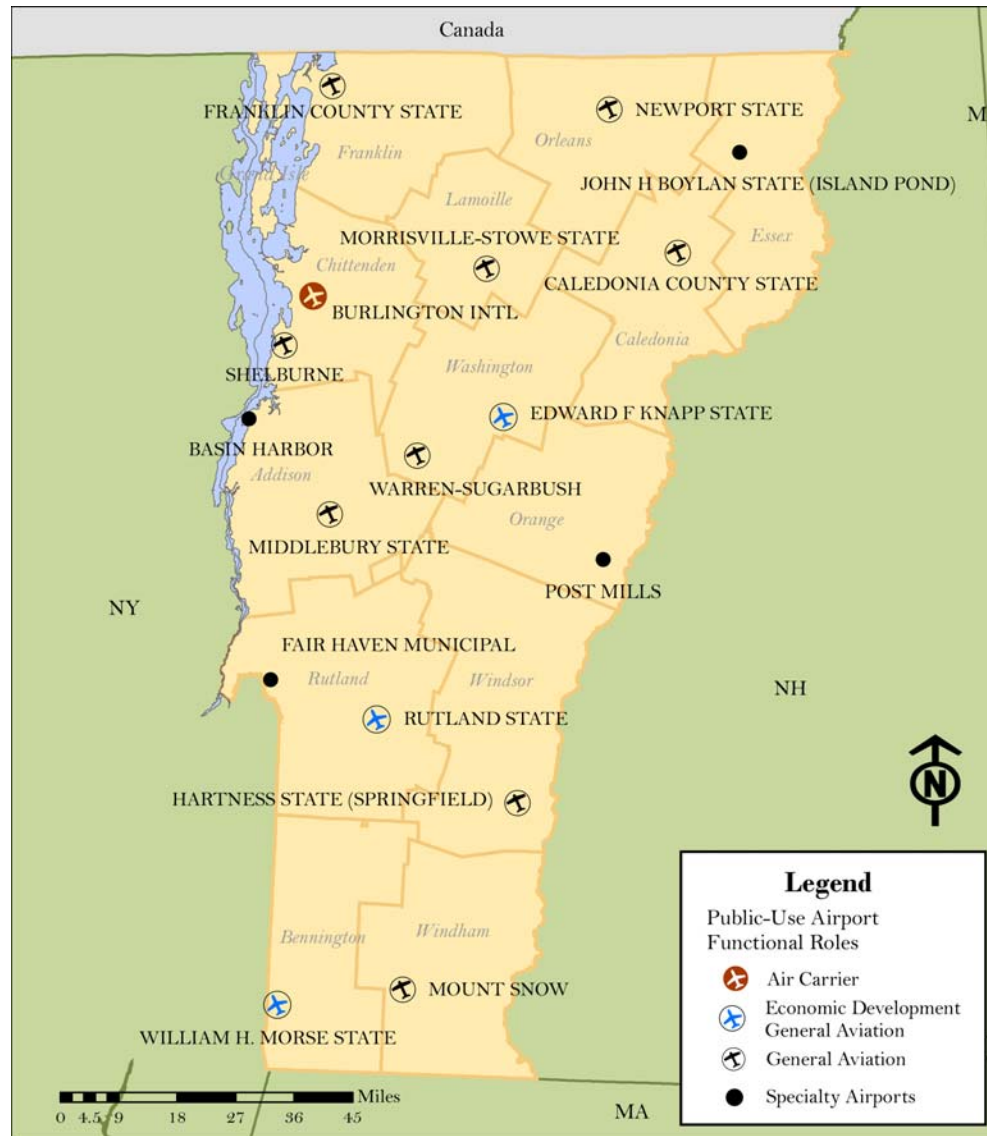
- Population within 20 Nautical Miles
- Based Aircraft
- Jet Operations with Instrument Flight Plans
- Total Operations
- Runway Length
- Runway Surface
- Approach Type
- Economic Impact



Functional Roles Definitions

- **National Service Airports** – National Service airports accommodate the highest level of general aviation activity. These airports serve a contributing role in enabling the local, regional, and statewide economy to have access to and from the national and global economy. Two of the airports in this category, Burlington International and Rutland State, also provide access to scheduled commercial airline service.
- **Regional Service Airports** – Regional airports serve primarily general aviation activity, with a focus on serving business activity including small jet and multiengine aircraft. These airports serve a significant role in supporting the local and regional economies and connecting them to the State and national economies.
- **Local Service Airports** – Local Service airports are considered to have community importance, primarily serving recreational and personal flying activities. The airports serve a contributing role in the local economy. These airports may serve some corporate/business aviation users in addition to flight training, but primarily provide storage and facilities for piston-driven single and multi-engine aircraft.
- **Specialty Service Airports** – Specialty airports provide aviation services for smaller single-engine aircraft and other non fixed-wing aircraft such as ultralights and gliders. In some cases, these airports provide access to seasonal tourist destinations in Vermont.

Initial Functional Role



A detailed map of Vermont is visible on the left side of the slide, showing major cities like Montpelier, Barre, and Burlington, along with state routes and geographical features. The map is partially obscured by the slide's design elements.

Forecast Overview

- Consider socioeconomic conditions
- Evaluate industry trends
- Develop methodologies
- Compare results and select preferred methodology

A map of Vermont is visible on the left side of the slide, showing major cities like Montpelier, Barre, and Springfield, along with various roads and geographical features. The map is partially obscured by the text and list on the right.

GA Industry Trends

- Growth in corporate including fractional
- Continued entry of new manufacturers
- Continued growth in experimental
- Increase in number of pilots (Sport Pilot and Light Sport Aircraft Rule)
- Growth in jet activity & VLJ

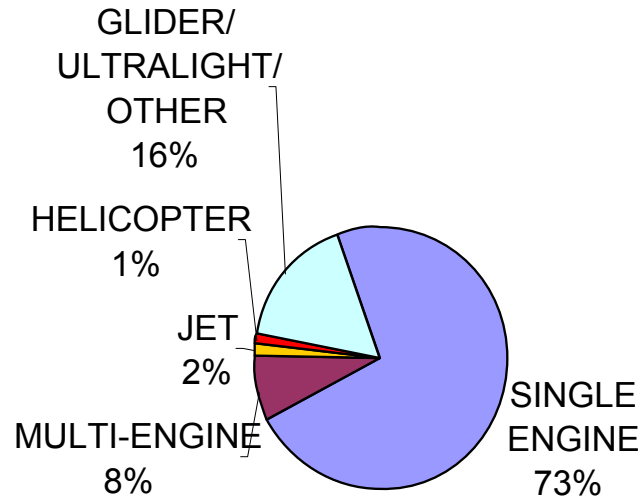
A map of Vermont is visible on the left side of the slide, showing various towns and roads. The map is partially obscured by the text and the decorative elements.

Commercial Industry Trends

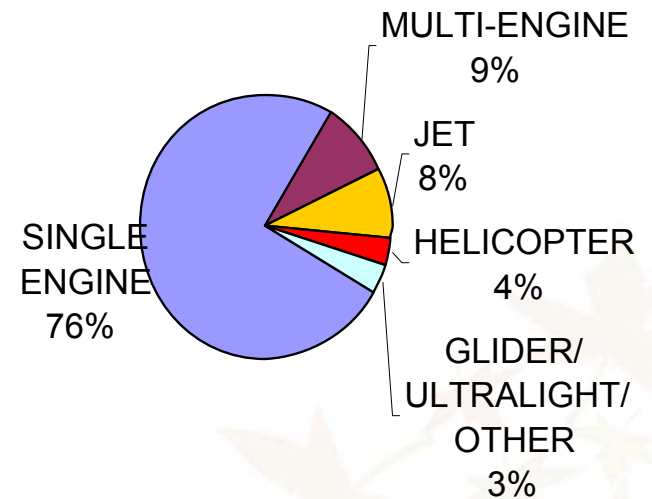
- Continuation of financial losses by traditional carriers
- Bankruptcies and mergers
- Enplanements have rebounded to pre 9-11 levels, with high int'l
- Change in aircraft types and impact on airports

2005 VT Based Aircraft

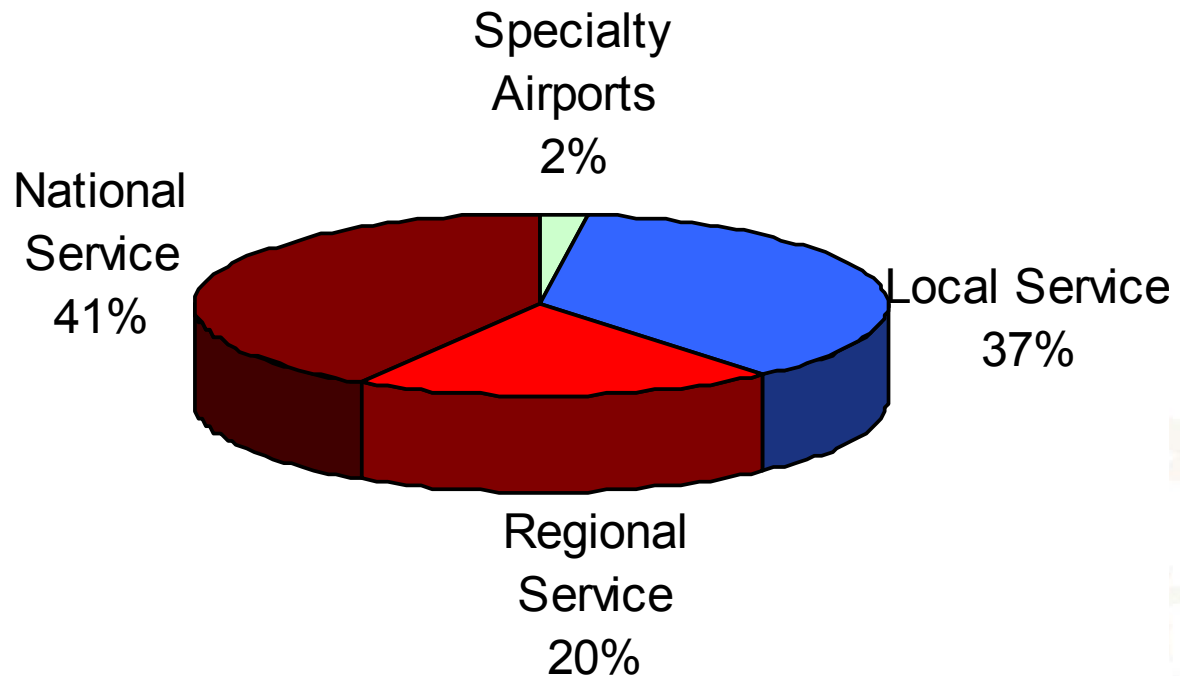
Vermont



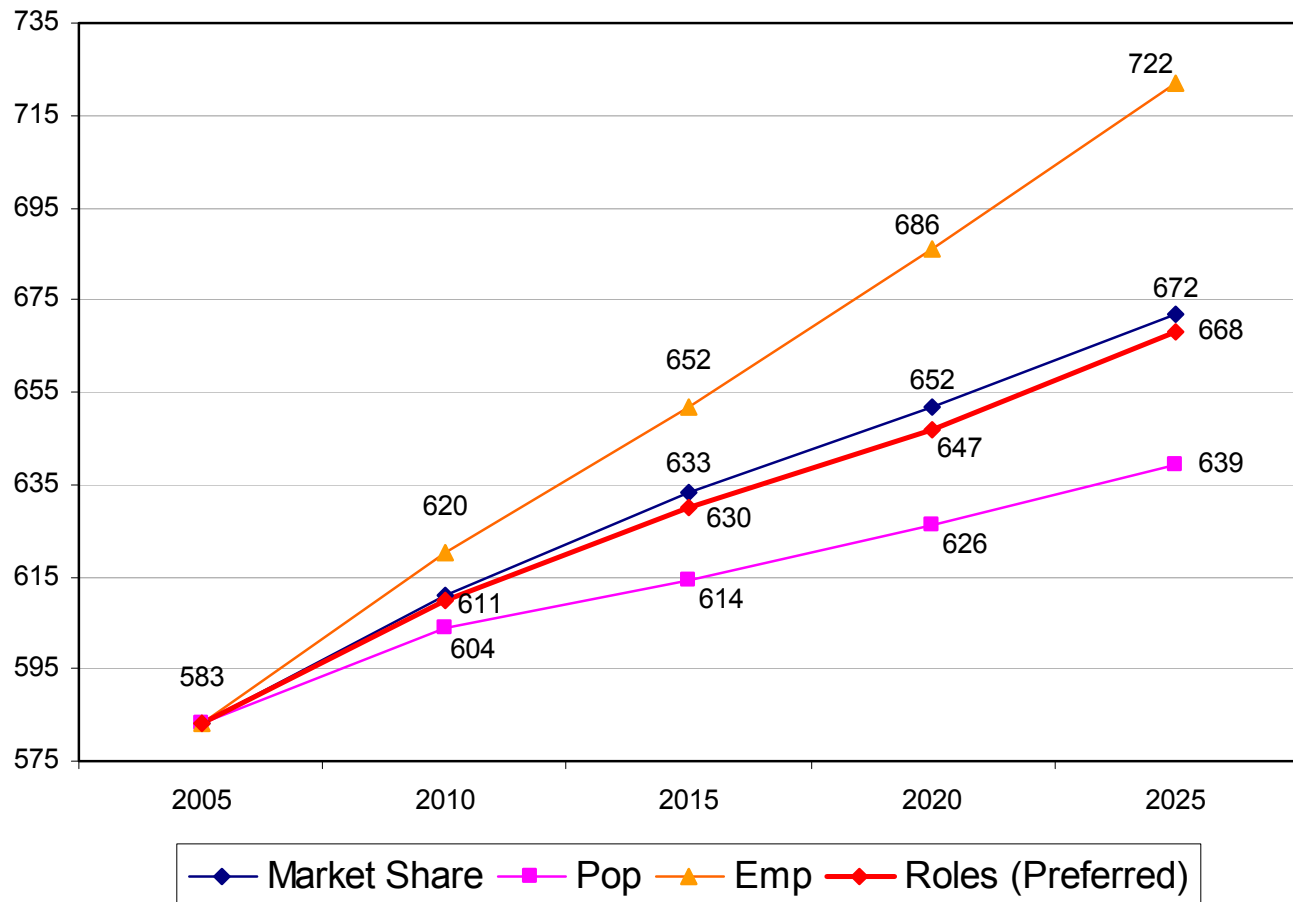
United States



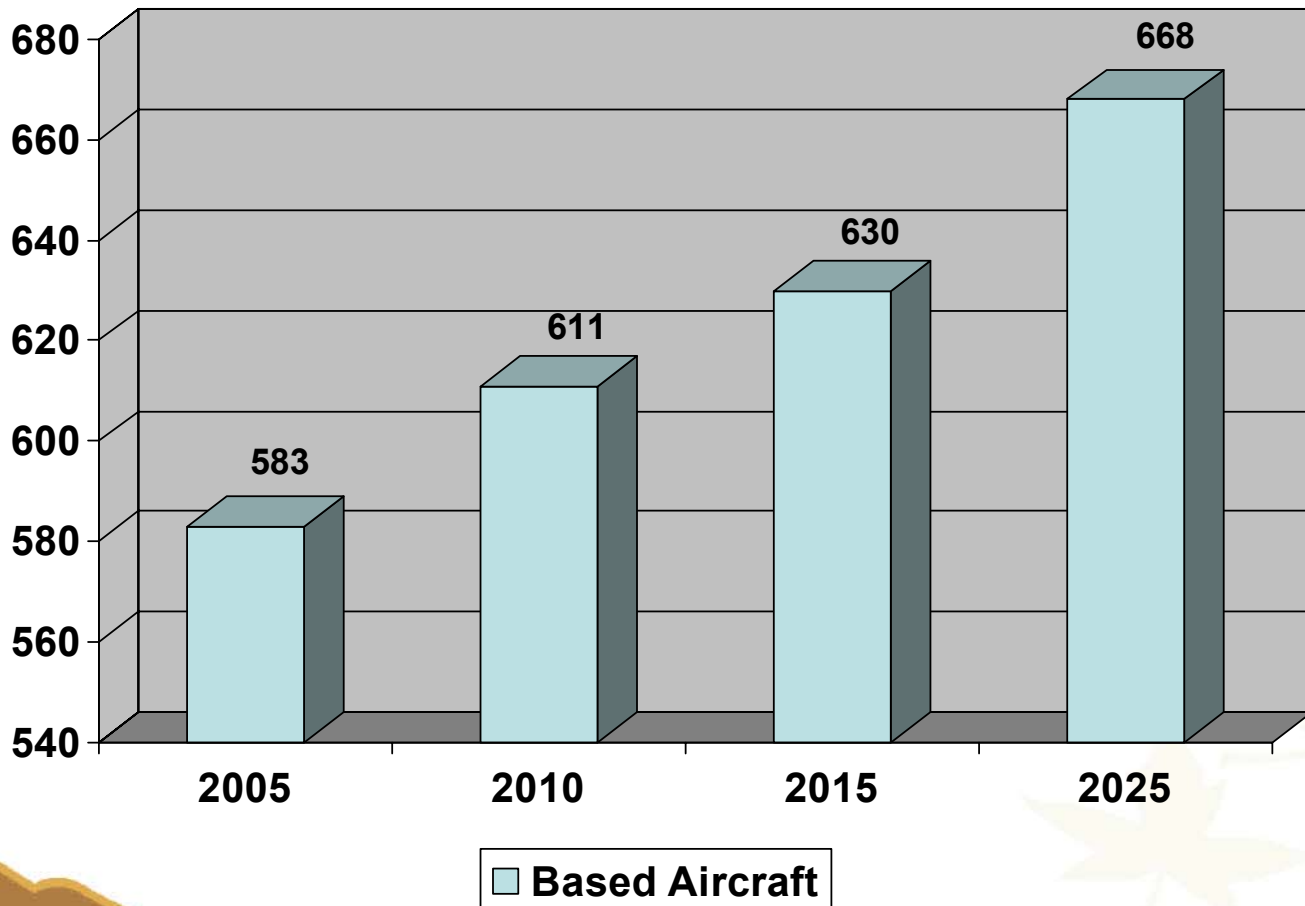
2005 VT GA Operations by Role



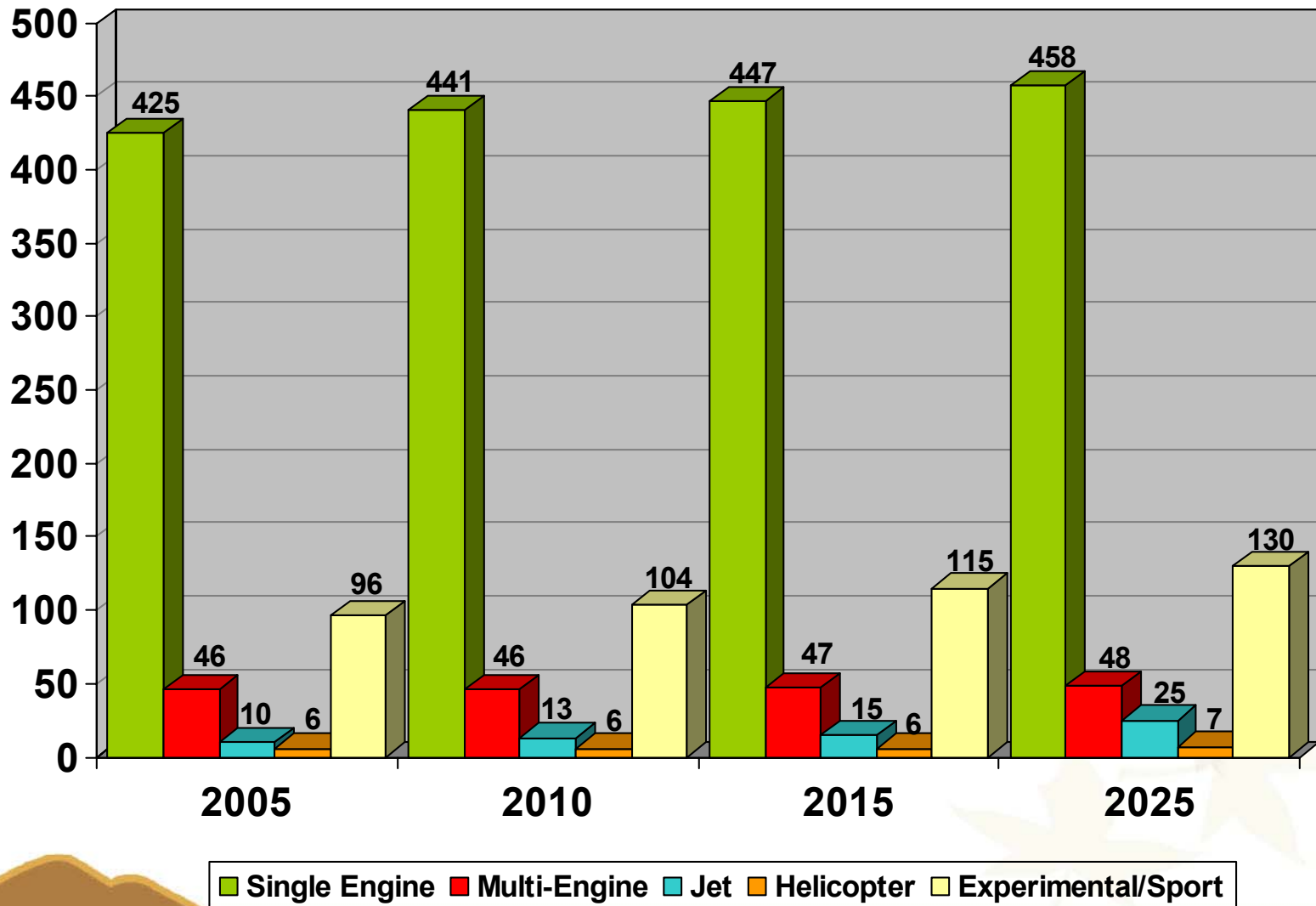
Based Aircraft Forecasts



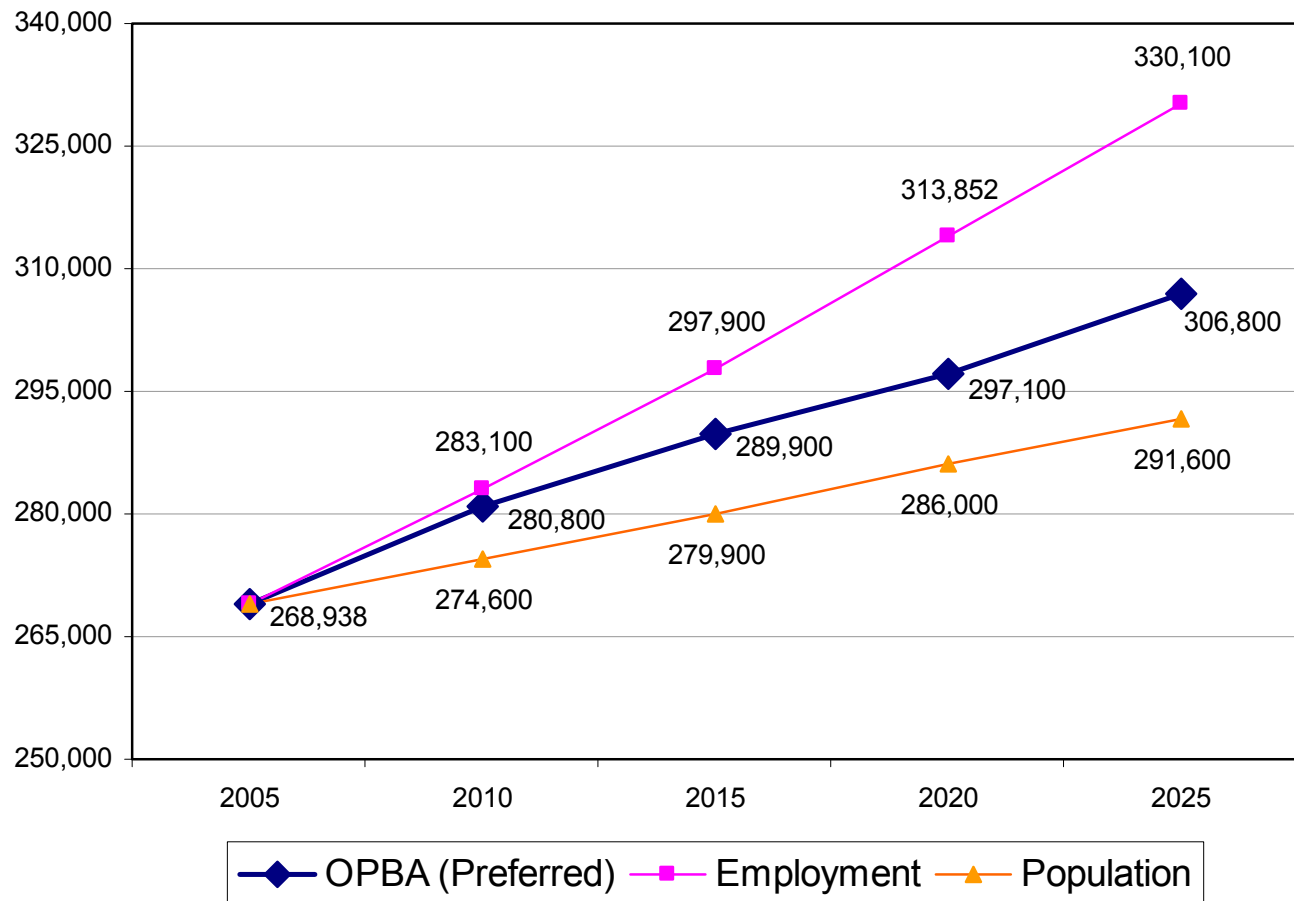
Preferred Based Aircraft (Functional Role Method)



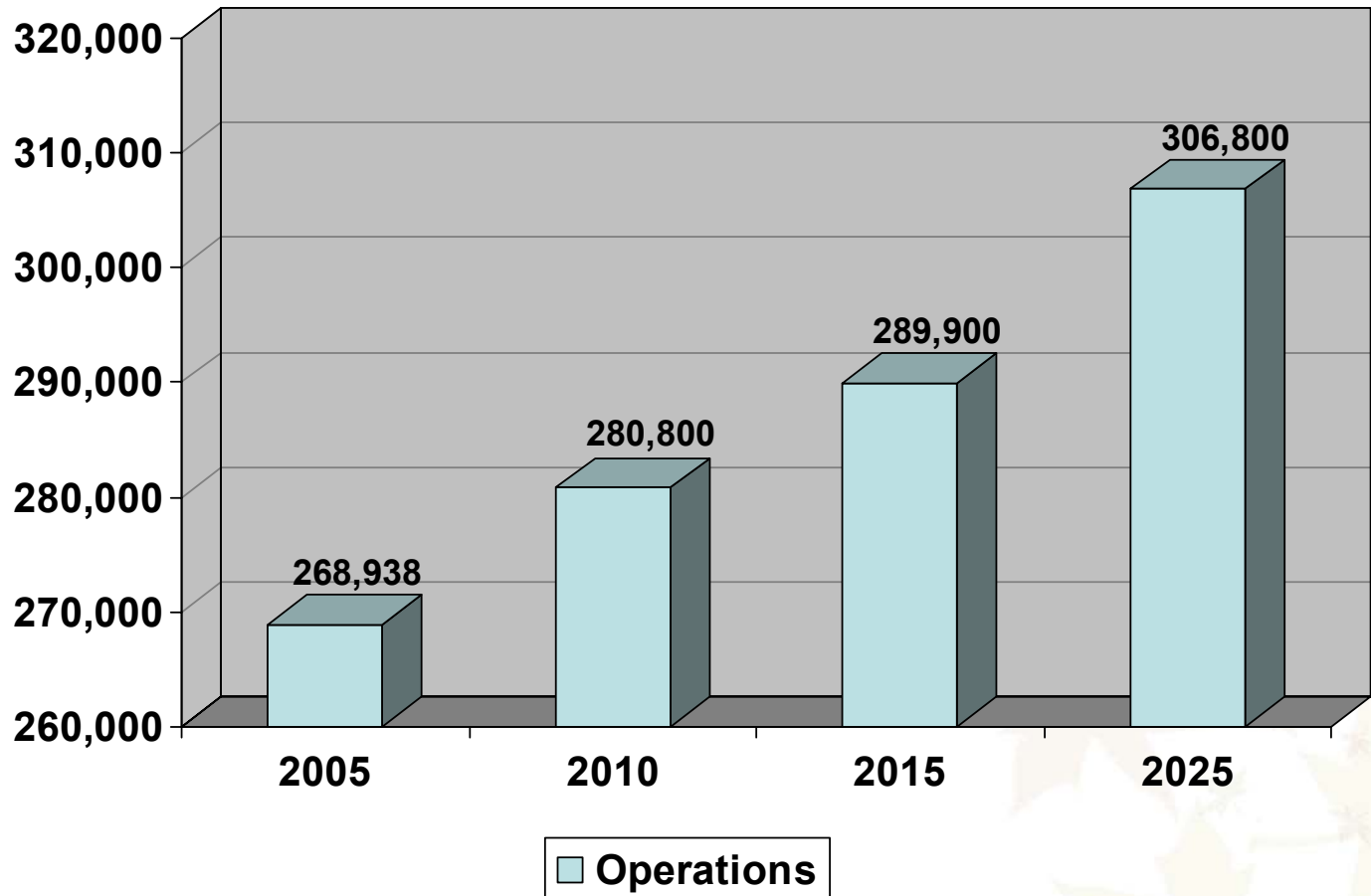
Forecast Fleet Mix



Operations Forecasts



Preferred GA Operations (OPBA Method)



Facility & Service Objectives

National Service

ARC:	C-II
Runway Length:	Minimum of 5,500 Ft. for primary
Runway Width:	100 Ft. for primary
Runway Strength:	Minimum 60,000 lbs. for primary
Taxiway:	Full Parallel for primary runway
Approach	Published Precision Approach with Ceiling Minimums of 200 feet or Less and Visibility Minimums of ½ Mile or Less
NAVAIDs:	ILS, ALS, REILs, Rotating Beacon, Lighted Wind Indicator/Segmented Circle,
Lighting:	HIRL, MITL
Weather:	ASOS/AWOS and a PWBS
Ground Communications:	Public Phone, GCO or RCO
Covered Storage:	70% of Based Aircraft
Aircraft Apron:	30% of Based Aircraft Plus an Additional 75% for Transient Users
GA Terminal/Administration Building:	2,500 Sq. Ft.
Fencing:	Entire Airport
Auto Parking:	1 Space for Each Based Aircraft Plus 50 % for Employees/Visitors
Fuel:	Self-Service AvGas & Jet A
FBO:	Full Service
Maintenance:	Full Service
Ground Transportation:	Rental Car Available
Other:	Building for Airport Maintenance Equipment

Facility & Service Objectives

Regional Service	
ARC:	B-II
Runway Length:	Minimum of 5,000 Ft. for Primary
Runway Width:	75 Ft. for primary
Runway Strength:	Minimum 30,000 lbs. for Primary
Taxiway:	Full Parallel for Primary Runway
Approach:	Published Non-Precision Approach with Ceiling Minimums of 400 feet or Less and Visibility Minimums of 1 mile or Less
NAVAIDS:	Rotating Beacon, Lighted Wind Indicator/Segmented Circle, REILs, VGSI, Appropriate Instrument(s) for Non-Precision Approach
Lighting:	MIRL, MITL
Weather:	ASOS/AWOS and a PWBS
Ground Communications:	Public Phone, GCO or RCO
Covered Storage:	70% of Based Aircraft
Aircraft Apron:	30% of Based Aircraft Plus Additional 50% for Transient Users
GA Terminal/Administration Building:	2,500 Sq. Ft.
Fencing:	Entire Airport
Auto Parking:	1 Space for Each Based Aircraft Plus 50 % for Employees/Visitors
Fuel:	Self Service AvGas & Jet A
FBO:	Full Service
Maintenance:	Full Service
Ground Transportation:	Rental Car Available
Other:	Building for Airport Maintenance Equipment

Facility & Service Objectives

Local Service

ARC:	B-I
Runway Length:	Minimum of 4,000 Ft. for Primary
Runway Width:	75 Ft. for Primary
Runway Strength:	Minimum 12,500 lbs. for Primary
Taxiway:	Partial Parallel, Connectors or Turnaround for Primary Runway
Approach:	Published Non-Precision Approach with Ceiling Minimums of 1,000 feet or Less and Visibility Minimums of 3 Miles or Less
NAVAIDs:	Rotating Beacon, Lighted Wind Indicator/Segmented Circle, VGSI, Appropriate Instrument(s) for Non-Precision Approach
Lighting:	MIRL
Weather:	ASOS/AWOS Desirable, PWBS
Ground Communications:	Public Phone, GCO or RCO as needed
Covered Storage:	60% of Based Aircraft
Aircraft Apron:	40% of Based Aircraft Plus Additional 25% for Transient Users
GA Terminal/Administration Building:	Minimum 1,500 Sq. Ft.
Fencing:	Entire Airport
Auto Parking:	1 Space for Each Based Aircraft Plus 25 % for Employees/Visitors
Fuel:	Self Service AvGas; Jet A as Required
FBO:	Limited Service
Maintenance:	Limited Service
Ground Transportation:	Loaner Car Available, Rental Car Desirable
Other:	Building for Airport Maintenance Equipment

Facility & Service Objectives

Specialty Service	
ARC:	A-I
Runway Length:	Maintain Existing
Runway Width:	NPIAS – 60 Feet, Non-NPIAS – Maintain Existing
Runway Strength:	Not an Objective
Taxiway:	Partial Parallel Desirable for Paved Runways, Turnaround
Approach:	Visual
NAVAIDs:	Not an Objective
Lighting:	Not an Objective
Weather:	PWBS desirable
Ground Communications:	Public Phone, GCO or RCO as Needed
Covered Storage:	Maintain Existing
Aircraft Apron:	Maintain Existing
GA Terminal/Administration Building:	Maintain Existing
Fencing:	Operations Area at a Minimum; Entire Airport Desirable
Auto Parking:	Maintain Existing
Fuel:	AvGas; Jet A as Required
FBO:	Limited Service
Maintenance:	Not an Objective
Ground Transportation:	Desirable
Other:	Not an Objective

A detailed map of Vermont is shown on the left side of the slide. It displays major cities like Montpelier, Barre, and Burlington, along with state routes and geographical features. The map is partially obscured by the text and list on the right.

Adequacy Measures

- Percent of Vermont's population and land area within 60 minutes of an airport with commercial service (Vermont and neighboring airports)
- Percent of Vermont's population and land area within 30 minutes of an airport with a 5,000-foot long runway
- Percent of Vermont's population and land area within 30-minutes of an airport with a 5,000-foot long runway having a precision approach
- Percent of population and land area coverage provided by airports in each of the functional roles

A map of Vermont is shown on the left side of the slide. It displays major cities such as Montpelier, Barre, Burlington, and Springfield, along with various state and federal roads. The map is partially obscured by the text and list on the right.

Adequacy Performance

- 93% of Vermont's population and 75% of land area within 60 minutes of an airport with commercial service
- 62% of Vermont's population and 38% of land area within 30 minutes of an airport with a 5,000-foot long runway
- 44% of Vermont's population and 21% of land area within 30-minutes of an airport with a 5,000-foot long runway having a precision approach

A map of Vermont is visible on the left side of the slide, showing various towns and roads. The map is partially obscured by the text and table.

Adequacy by Role

- Percent of population and land area coverage provided by airports in each of the functional roles

	Population	Land Area
National	55%	32%
Regional	19%	21%
Local	27%	30%
Specialty	60%	43%



Development Measure

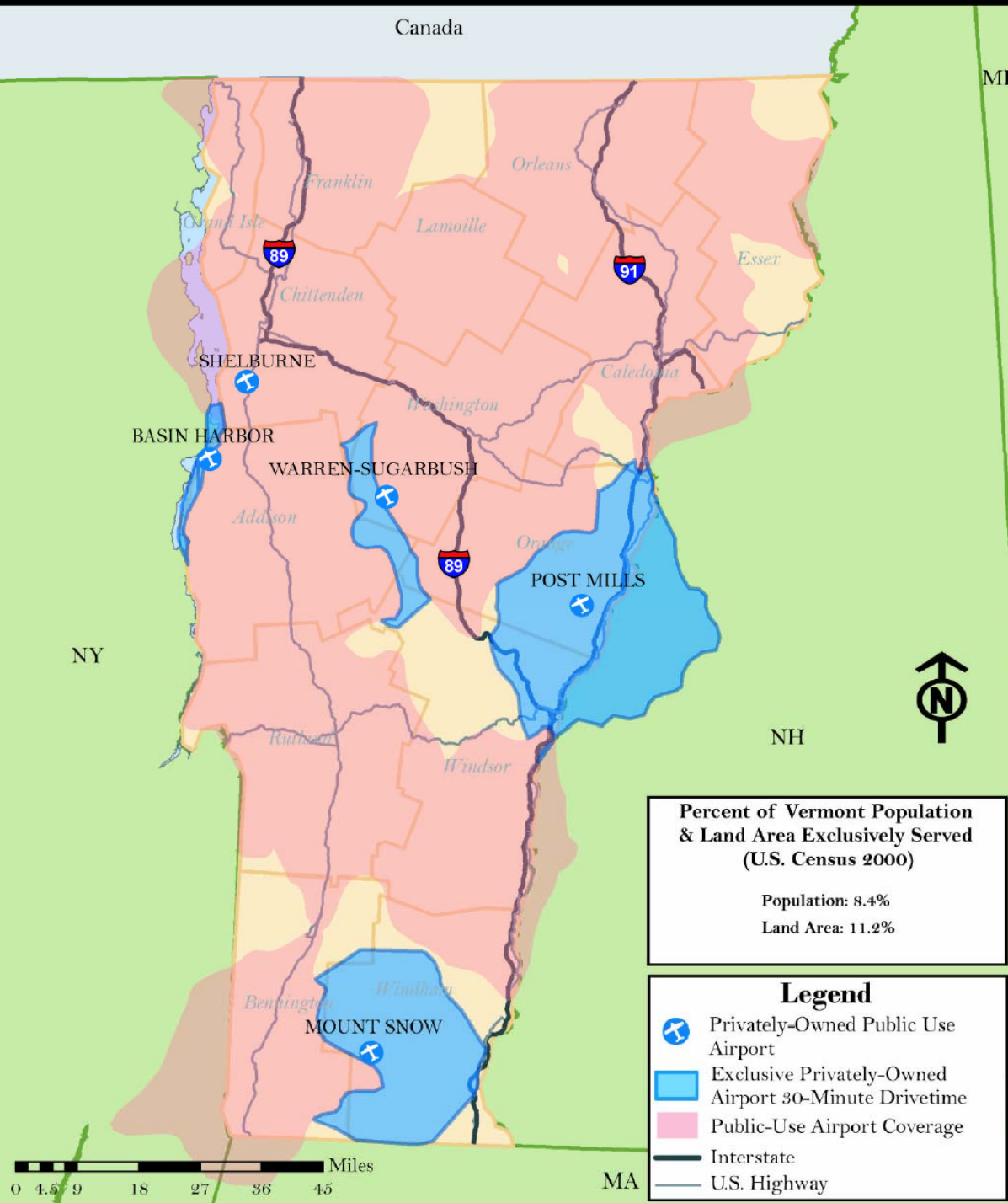
- Percent of population and land area exclusively served (within 30 minutes) by a privately owned airport
- Percent of system airports meeting minimum facility and service objectives
- Percent of system airports having a Pavement Condition Index (PCI) of “good” or better
- Percent of system airports with an Airport Layout Plan (ALP) that has been updated within the last 10 years
- Percent of airports having local airport-related zoning
- Percent of airports that are included in regional land use plans that include airport-compatible land uses in the airport environs



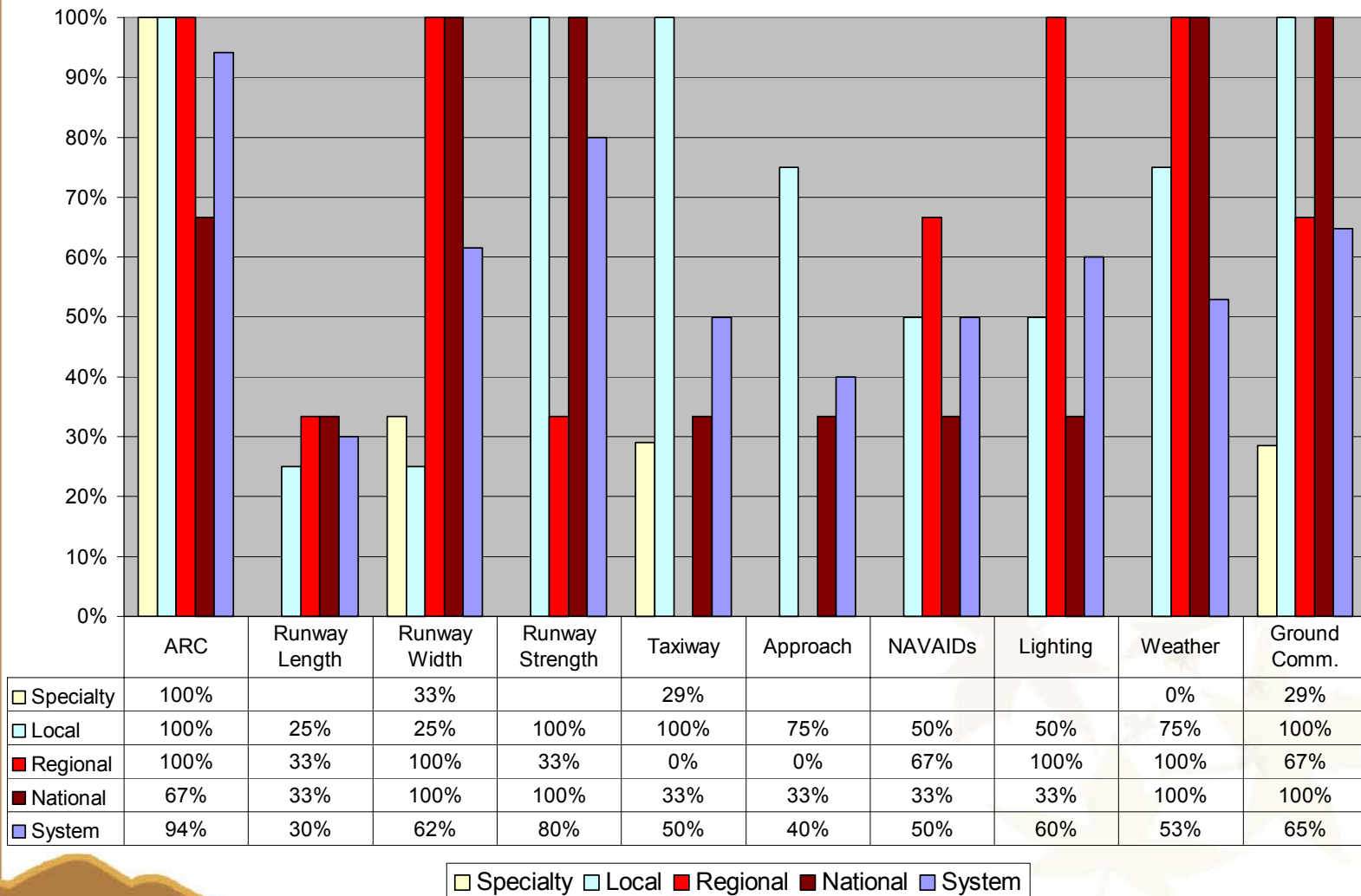
Development Performance

- 8% of population and 11% of land area exclusively served (within 30 minutes) by a privately owned airport
- 75% of system airports have a PCI of “good” or better
- 71% of system airports have an ALP that has been updated within the last 10 years
- 47% of system airports having local airport-related zoning
- 76% of system airports are included in regional land use plans that include airport-compatible land uses in the airport environs

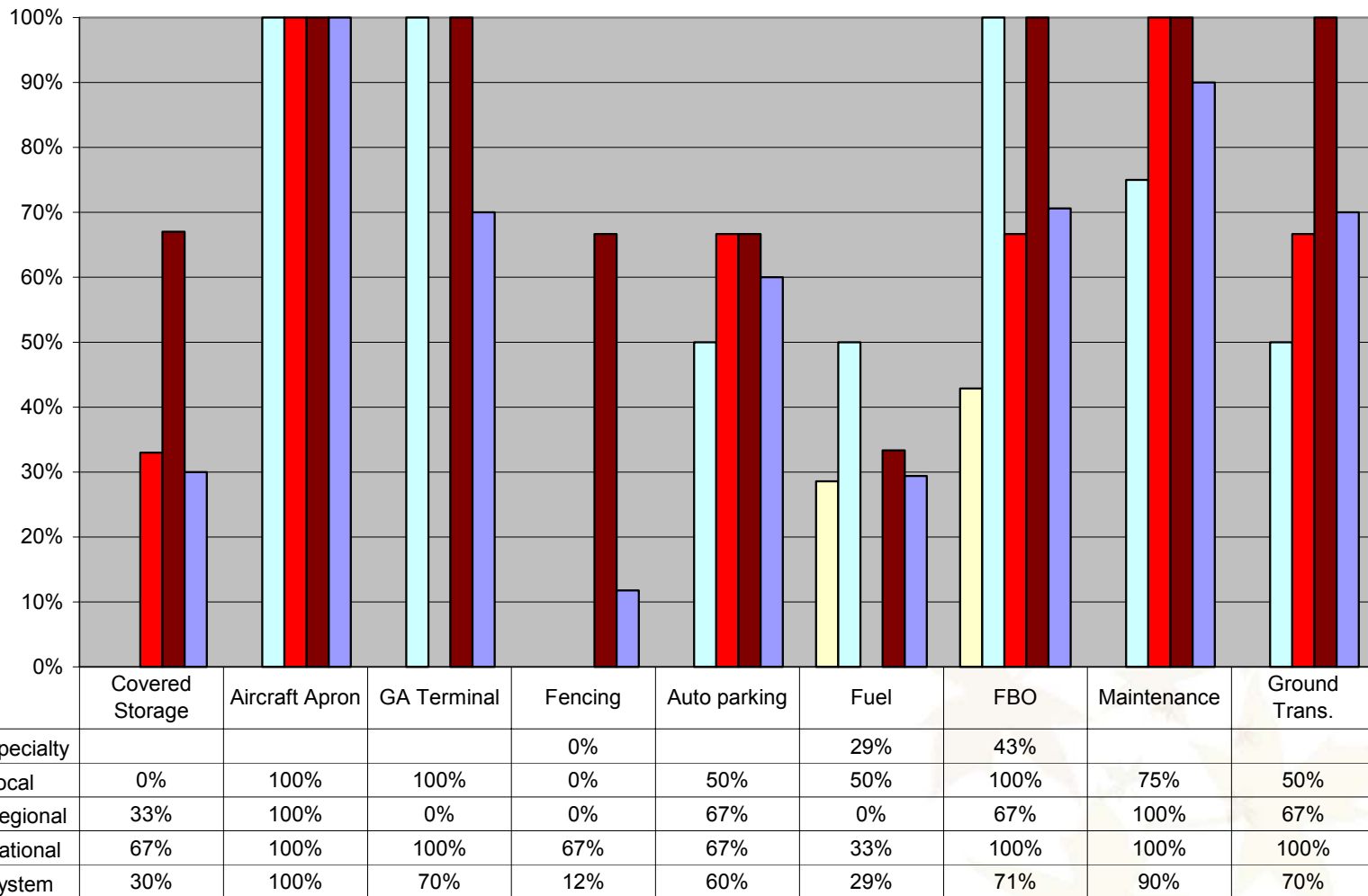
Private-Only Coverage



Facility & Service Objectives



Facility & Service Objectives (2)



Specialty Local Regional National System



Safety & Security Measures

- Percent of airports meeting applicable FAA airport design standards (TBD)
- Percent of airports meeting applicable VTrans or TSA security-related recommendations (TBD)

A map of Vermont is visible on the left side of the slide, showing various towns and roads. The map is partially obscured by the text and the decorative border.

Draft Recommendations

- Continue to support EAS Program
- Runway extensions to increase access to business-class airports: Morrisville-Stowe & William H. Morse State
- To improve access for National coverage, make William H. Morse State National category
- Develop precision approach at Rutland State Airport

A detailed map of Vermont is visible on the left side of the slide, showing various towns and road networks. The map is partially obscured by the text and decorative elements.

Additional Recommendations

- Improve facilities and services to increase compliance with objectives
- Evaluate safety and security measures
- Consider System Plan results in the Capital Facilities Program

A detailed map of Vermont is visible on the left side of the slide, showing major roads, towns, and geographical features. The map is partially obscured by the text and graphics on the right.

Policy Plan

- Provide guidance on policies related to aviation in Vermont
- Plans being prepared for all modes of transportation
- Review by Executive Staff in July

A detailed map of Vermont is shown on the left side of the slide, partially obscured by the text box. It displays various towns, roads, and geographical features across the state.

Role of Vermont Airport System

- Provide access from both the ground and the air
- Preserve and enhance existing infrastructure (asset) investments
- Promote a safe and secure system of airports
- Support economic activity throughout the State
- Integrate with the local, regional, and national transportation systems
- Prepare for future transportation needs through new technology
- Promote aviation education
- Promote compatible land use
- Promote health, safety, and emergency services



State of Vermont Aviation Vision

“Vermont’s airport system will be accessible, safe and secure, meeting the needs of its users, including implementing new technologies to support the future system. The airport system will be preserved and enhanced, while meeting Federal and State guidance while promoting responsible environmental stewardship and land use compatibility. Vermont’s airports will be operated as business-oriented facilities focusing on creating opportunities for a return on the investment and will provide intermodal linkages to national transportation systems.”



VTrans Aviation Mission

The Vermont Agency of Transportation's aviation mission is to support, maintain and enhance the 10 State-owned airports. As the owner/operator of 10 State-owned airports, VTrans promotes efficient and effective operation of the its airports to assure safe, secure, and reliable air transportation of goods and people, while being environmentally responsible, cost-effective and supportive of Vermont's economy. Emergency services, aviation education, financial responsibility, and promotion of compatible land use are part of the mission for VTrans, as is playing a supportive role to all airports and aviation statewide.

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Recommended State Policies

- Advocate for the promotion of aviation and airports, including education of youth and flight training to promote sustainability in Vermont's aviation industry.
- Maintain all 10 State-owned airports in order to keep them open and safe, while ensuring that new facilities and technologies can be added to accommodate future air transportation system needs.
- Maintain adequate access to public-use commercial and general aviation airports for all areas of Vermont.
- Promote generating appropriate revenues from the operation of State-owned airports utilizing a business-oriented approach.

A map of Vermont is visible on the left side of the slide, showing various towns and roads. The map is partially obscured by the text and the star graphic.

Recommended State Policies (2)

- Promote development of facilities at State-owned airports in response to demand including tie-down areas and hangars, including associated surface access and utilities either with State or private funding.
- Implement an updated computerized Airport Management System such as Airport IQ consistent with the Strategic Enterprise Initiative that is based on achieving the performance targets set for the aviation system, with a high priority given to the matching of available federal funds.
- Support federal passenger Essential Air Service subsidies at Rutland State Airport and continued growth of passenger service at Burlington International Airport and encourage new passenger service development such as charter and other services through marketing and promotion.

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Recommended State Policies (3)

- Promote compatible land use near airports.
- Utilize an asset management approach to ensure appropriate maintenance and investment in existing airport assets.
- Seek adequate and stable funding from all available sources to support the State's goals, mission and policies.
- Promote airports as economic generators and catalysts.
- Promote establishment of a statewide airports council to provide a forum for Vermont's airport operators, both public and private, to discuss current issues, activities, and processes to assist in enhancing Vermont's airport system.

Goals, Measures, 5-Yr. Target

Performance Category	Associated Aviation System Goals		Performance Measures	Existing Conditions	5-Year Target
ACCESSIBILITY	A.	Provide a system of airports that is accessible for people and goods from the ground and air	Percent of Vermont's population and land area within 60-minutes of an airport with commercial service (Vermont and neighboring airports)	93% population 75% land area	Maintain existing standards
			Percent of Vermont's population and land area within 30-minutes of a 5,000-foot runway	62% population 75% land area	Increase to 70-75% population 80% land area
			Percent of population and land area exclusively served (within 30 minutes) by a privately-owned public-use airport	8% population 11% land area	Decrease to 5% population 10% land area
	B.	Provide intermodal ground access opportunities/services (such as rental car, taxi, bus, bike)	Percent of airports with intermodal opportunities/services	70%	Increase to 80%
DEVELOPMENT	C.	Preserve and enhance existing infrastructure investment through maintenance, rehabilitation and development of new infrastructure	Percent of system airports meeting corporate aviation-related facility and service objectives including runway length and width, taxiway type, approach, and fuel	44%	Increase to 50%
			Percent of system airports having a pavement condition index (PCI) of "good" or better	75%	Increase to 85%
	D.	Promote airport-compatible land uses	Percent of airports having local airport-related zoning	53%	Increase to 100%
			Percent of airports that are recognized in regional land use plans that include airport-compatible land uses in the airport environs	76%	Increase to 100%
SAFETY AND SECURITY	E.	Provide safe and secure system of airports that meets State and federal guidelines, including 5010 inspection program	Percent of airports meeting applicable FAA airport design standards	TBD	75%
			Percent of airports meeting applicable VTrans or TSA security-related recommendations	TBD	100%
			Percent completion of monthly safety inspections at all State-owned airports	100%	100%

Goals, Measures, 5-Yr. Target (2)

Performance Category	Associated Aviation System Goals		Performance Measures	Existing Conditions	5-Year Target
FUNDING AND ECONOMICS	F.	Seek adequate and stable funding, including FAA assistance, and assure appropriate staffing to support the Agency's mission	Achieve block grant status with FAA	Conventional FAA funding	Achieve block grant status by 2010
	G.	Maintain and utilize Vermont's Airport Capital Facilities Program to make appropriate and timely investment decisions or project prioritization decisions	Implementation of updated computerized Airport Management System	TBD	Complete by 2009
	H.	Maintain Commercial Air Service at Rutland State Airport and support its development elsewhere in the state AND Encourage additional commercial and cargo services where appropriate	Number of airports with commercial air service and cargo activity	2 airports	2 airports
MAINTENANCE	I.	Maintain an up-to-date database on aviation facilities	Implementation of updated web-enabled database system that provides additional features including performance measurement tracking	Underway	Complete by 2008
	J.	Strive to generate appropriate revenues from the operation of the State-owned airports utilizing a business-oriented approach with the leases	Number of airport leases that have been updated with current rate structures	TBD	Increase by 3% annually

Estimated Airport Development Costs

	Funding			
	Total	FAA	State	Local
National Service				
Burlington International	\$37,775,000	\$35,886,250	\$1,133,250	\$755,500
Edward F. Knapp State	\$7,175,425	\$6,769,154	\$400,309	\$0
Rutland State	\$3,144,750	\$2,987,513	\$157,238	\$0
William H. Morse State*	\$6,505,500	\$6,180,225	\$325,275	\$0
Regional Service				
Hartness State	\$2,481,500	\$2,167,425	\$114,075	\$0
Morrisville-Stowe State	\$6,096,813	\$5,791,972	\$304,841	\$0
Local Service				
Caledonia County State	\$4,629,000	\$4,207,550	\$421,450	\$0
Franklin County State	\$2,418,000	\$2,297,100	\$120,900	\$0
Middlebury State	\$3,391,000	\$3,221,450	\$169,550	\$0
Newport State	\$2,740,000	\$2,318,000	\$422,000	\$0
Specialty Service				
Basin Harbor	\$65,000	\$0	\$0	\$65,000
Fair Haven Municipal	\$3,505,000	\$3,329,750	\$87,625	\$0
John H. Boylan State	\$392,500	\$325,375	\$67,125	\$0
Mount Snow	\$1,745,000	\$0	\$0	\$1,745,000
Post Mills	\$65,000	\$0	\$0	\$65,000
Shelburne	\$65,000	\$0	\$0	\$65,000
Warren-Sugarbush	\$584,375	\$0	\$0	\$584,375
Total Costs	\$82,778,863	\$75,481,763	\$3,723,637	\$3,279,875